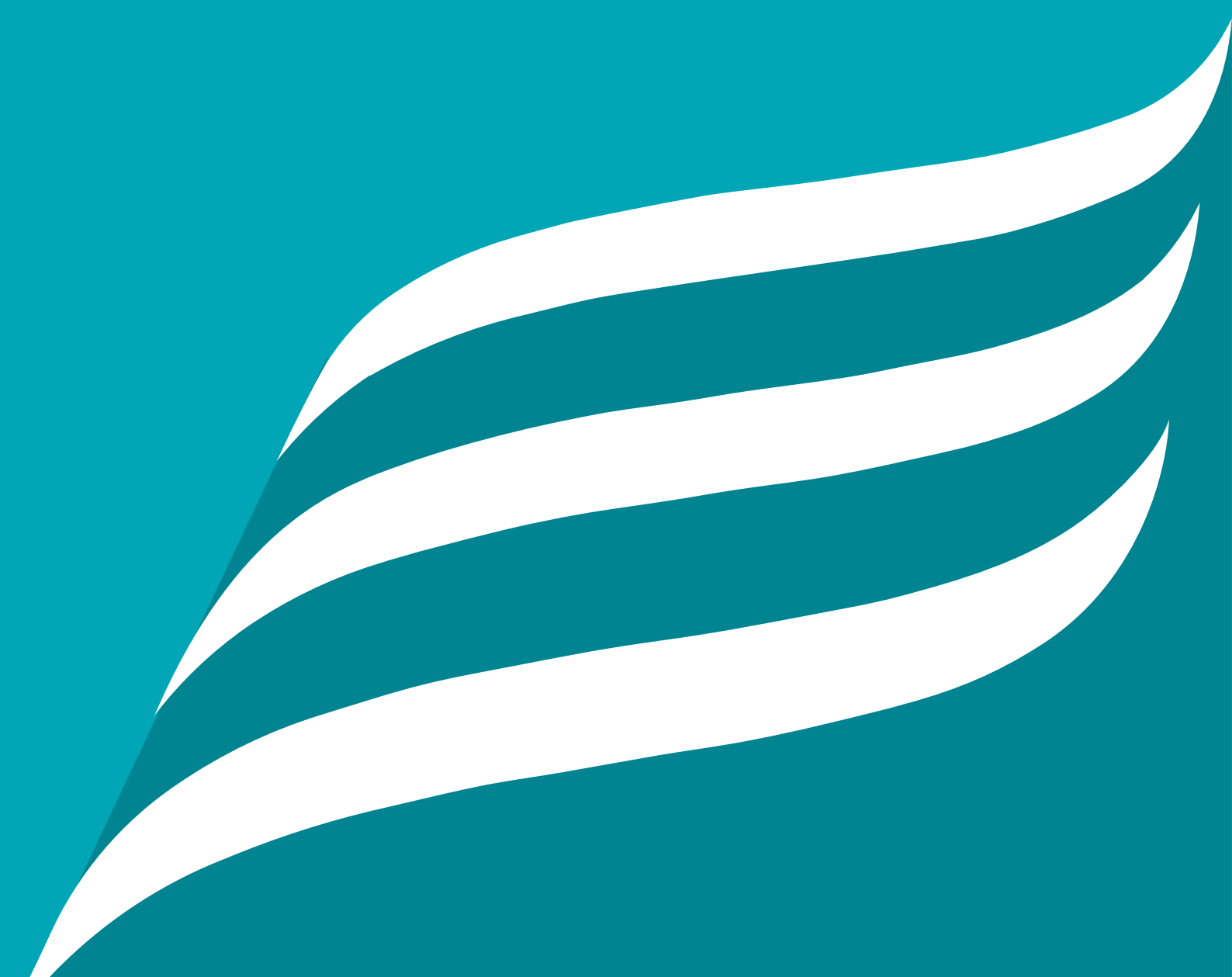




PEET LIMITED
Flagstone City CA3 South
Site-Based Stormwater Management Plan

QC4012_002-REP-004-5

28 JULY 2026



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Rev	Date	Description	Author	Reviewer	Project Mgr.	Approver
0	27/02/2024	Draft Issue	Jesse Hunter	Mark Page	Jesse Hunter	Mark Page
1	15/03/2024	Final Issue	Jesse Hunter	Mark Page	Jesse Hunter	Mark Page
2	23/08/2024	Further Issues Response	Jesse Hunter	Mark Page	Jesse Hunter	Mark Page
3	1/08/2025	Stage 10 Minor Change Application	Simon Tang	Jesse Hunter	Jesse Hunter	Mark Page
4	18/02/2026	RFI Response (DEV2024/1491/3)	Simon Tang	Jesse Hunter	Jesse Hunter	Mark Page
4A	08/06/2026	Stage 13 and Stage 9 Minor Change Application (Draft Issue)	Simon Tang	Mark Page	Jesse Hunter	Mark Page
5	28/07/2026	Stage 13 and Stage 9 Minor Change Application (Final Issue)	Simon Tang	Jesse Hunter	Jesse Hunter	Mark Page

Signatures:






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1. INTRODUCTION

Engeny Australia Pty Ltd (Engeny) was engaged by Peet Limited (Peet) to prepare a Site-Based Stormwater Management Plan (SBSMP) for the proposed Context Area 3 (CA3) South development at Flagstone City located in Flagstone, Queensland.

1.1 Project Purpose and Scope

This SBSMP was developed to quantify Peet's obligations for the construction of stormwater quality and quantity infrastructure to protect the downstream Environmental Values (EV's) and achieve the Water Quality Objectives (WQOs) for the Site, as outlined in the endorsed Stormwater IMP (Peet, July 2018) (ref. DEV2012/209/6/8).

The scope of the project has included the following:

- Development of a Model for Urban Stormwater Improvement Conceptualisation (MUSIC) model to estimate pollutant loads generated by the proposed development.
- Development of a stormwater quality treatment train at each catchment outlet of the proposed development sized to achieve the required load-based reduction targets (WQOs).
- Development of a local hydrologic WBNM model for the Existing and Developed Scenarios.
- Simulation of the models for the 63.2% AEP design storm event for the critical envelope of durations and the full ensemble of temporal patterns.
- Sizing of detention basins at each catchment outlet to mitigate the Developed Scenario peak flow runoff to the Existing Scenario for the 63.2% AEP only, to achieve the waterway stability requirements over the Site.
- Consideration of stormwater quantity and flooding requirements to manage peak flow increase from the development.
- Preparation of a SBSMP report.

1.2 Site Characteristics

The Flagstone City development is intersected by Flagstone Creek, Sandy Creek and Sandy Gully. The proposed overall development covers a total area of approximately 1,037 ha made up of a combination of future development, future open space and retained natural vegetation, and is estimated to yield approximately 11,000 dwellings. The Flagstone City CA3 South development is located within Context Area 3 between Flagstone Creek and Sandy Creek, and west of CA2 Stages 2-5. The proposed development currently discharges runoff into both waterways and is proposed to maintain this condition in the Developed Scenario. The location of the proposed CA3 South development and its surroundings is shown in Figure 1.1.

The proposed layout prepared by RPS is provided in Appendix A.

1.3 Project History and Context

Peet has received approval for a previous ROL (1 into 2 lots) and Context Plan for Flagstone City Context Area 3 (Ref. DEV2020/1154) dated 31 May 2022.

Recently, Peet has received Development Application approval for the CA3 South Development on 7 May 2025 (Ref. DEV2024/1491).

This report is prepared in support of a Minor Change application to the DA approval. relating to Stage 9 and Stage 13.

1.4 Project Data and Guidelines

The following data has been utilised for this assessment:

- Flagstone Context Area 3 South Stage 13 Draft Concept Layout. (RPS, 23 July 2026).
- Flagstone Context Area 3 South Stage 9M/ 9N Draft Concept Layout. (RPS, 23 July 2026).
- Flagstone Context Area 3 catchments (Colliers, 4 July 2026).
- Flagstone Context Area 3 design earthworks data (Colliers, 18 July 2025).
- Flagstone City Stormwater Infrastructure Master Plan Version 1.4 (ref. DEV2012/209/6/8) (Peet, July 2018).
- 2021 1-metre LiDAR sourced from Logan City Council (LCC).
- Greenbank Thompson Road station (ID 40659) rainfall data.

The stormwater planning and associated modelling was undertaken in accordance with the following guidelines:

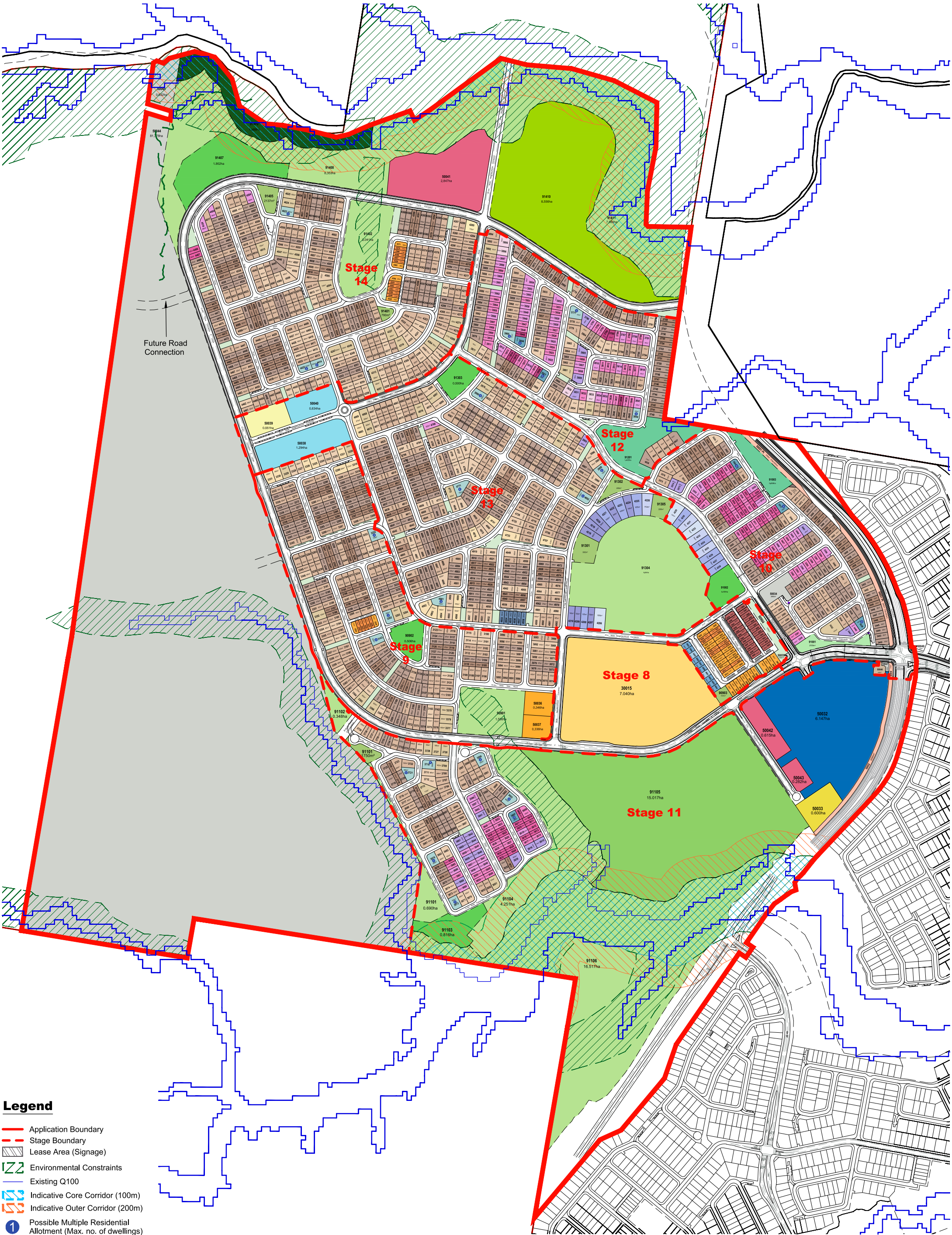
- Queensland Urban Drainage Manual (IPWEA, 2016).
- Australian Rainfall and Runoff (ARR) 2019 (Ball, et al, 2019).
- State Planning Policy (DILGP, 2016).
- MUSIC Modelling Guidelines (Water by Design, 2018).
- Wetland Technical Design Guidelines (Water by Design, 2017).
- Bioretention Technical Design Guidelines (Water by Design, 2014).

1.5 Performance Criteria

Several objectives have been adopted for the Flagstone City development with respect to the management of flooding and stormwater quality. The endorsed Stormwater IMP (Peet, July 2018) (ref. DEV2012/209/6/8) and *Flagstone City – Masterplan Flood Management Strategy Report* (ref. QC4012_002-REP-001-5) (Engeny, December 2024) outlines the framework and performance criteria for management of stormwater quality and stormwater quantity which are summarised below:

- Stormwater Quality:
 - 80% reduction in total suspended solids.
 - 60% reduction in total phosphorus.
 - 45% reduction in total nitrogen.
 - 90% reduction in gross pollutants.
 - Mitigation of the Developed Scenario 63.2% AEP design event peak flow to not exceed the Existing Scenario peak flow.
- Stormwater Quantity:
 - No increases to peak flows downstream of the Flagstone City development.
 - No development within the 1% AEP flood extent unless peak flows are appropriately mitigated to ensure no increases across the range of design events.
 - Existing watercourses to be maintained for conveyance of stormwater runoff.

The proposed CA3 South development has also been designed with consideration of the *Flagstone City Total Water Cycle Management* (Engeny, April 2025).



- Legend**
- Application Boundary
 - Stage Boundary
 - Lease Area (Signage)
 - Environmental Constraints
 - Existing Q100
 - Indicative Core Corridor (100m)
 - Indicative Outer Corridor (200m)
 - Possible Multiple Residential Allotment (Max. no. of dwellings)

TO BE READ IN CONJUNCTION WITH 110056-640 STAGES 8-14 OVERALL STATISTICS

PLAN REF: **110056 – 639**
Rev No: **I**
DATE: 22 JULY 2026
CLIENT: PEET
DRAWN BY: CB
CHECKED BY: CK

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FLAGSTONE CA3 SOUTH
STAGES 8 - 14
OVERALL PLAN OF SUBDIVISION



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2. STORMWATER QUALITY MANAGAMENT

2.1 Construction Phase

An Erosion and Sediment Control program and plan will be prepared for the construction phase of the development. This will be completed for the Site as part of the site contractor's management of the Site and is to be kept on Site and implemented for the duration of the construction phase.

2.2 Operational Phase

The SPP (July 2017), LCC Stormwater Quality and Flow Management Guidelines (July 2013) and the Logan Planning Scheme (LCC, February 2023) provide the criteria intended to ensure development at the Site is carried out in a way that will achieve the relevant WQOs.

The load-based reduction targets required at the Site are outlined below in Table 2.1.

TABLE 2.1: ADOPTED WATER QUALITY OBJECTIVES

Pollutant	Minimum Load-Based Reduction Target (%)
Total Suspended Solids (TSS)	80
Total Phosphorus (TP)	60
Total Nitrogen (TN)	45
Gross Pollutants (GP)	90

2.2.1 Climate Data

Climate data for the catchment was sourced from the Bureau of Meteorology (BOM). Rainfall data was obtained from the Greenbank Thompson Road station (ID 40659) for the 10 years between 1980 and 1989 at six (6) minute intervals, resulting in a mean annual rainfall of 784 mm.

2.2.2 Catchment Properties

The proposed bioretention basin locations and associated contributing catchment areas for water quality treatment are outlined in Figure 2.1. A lumped catchment approach was adopted for this study and is considered appropriate based on inspection of aerial imagery and the intended use of the Site. The land use of the proposed development area was assumed to be a mix of residential and commercial use. Rainfall-runoff and pollutant-export parameters were adopted from the recommended values identified in *MUSIC Modelling Guidelines (Water by Design, 2018)*.

As part of this amended report, a detailed assessment was undertaken to identify the fraction impervious values of the updated catchments based on the latest provided context plan. Table 2.2 provides a summary of the updated catchments information and MUSIC model parameters implemented.

TABLE 2.2: MUSIC MODEL PARAMETERS

Catchment	Area (ha)	Fraction Impervious (%)
1	2.9	69.0
2_Lower	6.0	61.6
2_Upper	19.5	59.9
3	14.9	10.6
4	9.9	67.7
5	11.7	68.9
6	9.2	87.3
7	30.0	67.3
8	2.4	70.8
9	14.9	67.9
10	52.9	64.7



Figure 2.1: MUSIC Modelling Catchments

2.2.3 Treatment System

Stormwater runoff from each catchment will be discharged into a bioretention basin at the catchment outlet upstream of the receiving waterway. Each bioretention basin is proposed to include a coarse sediment inlet pond for contributing catchments exceeding 5 ha, and a coarse sediment forebay for contributing catchment areas between 2 ha and 5 ha. This is in accordance with the *Bioretention Technical Design Guidelines (Water by Design, 2014)*.

It is noted that Catchment 1 and Catchment 6, medium-density and health precinct areas, respectively, are anticipated to be some form of community title. As such, the treatment system may be specified in the future as an equivalent proprietary device that will be managed and maintained by the landowner, and not transferred into Council ownership. Should this proprietary device be proposed in the future, it is expected that sizing of the treatment system will be undertaken to demonstrate the load-based pollutant reduction targets are achieved as outlined in this report. It is requested that any approval conditions are worded in such a way that will allow for a proprietary device to be proposed for these catchments in the future.

2.2.4 Treatment Train and Sizing

The bioretention system has been modelled in MUSIC in accordance with the MUSIC Modelling Guidelines (Water by Design, 2018). The treatment train produced in MUSIC is outlined in Figure 2.2.

Sizing of the coarse sediment inlet ponds and coarse sediment forebays was undertaken in accordance with the equations presented in the *Wetland Technical Design Guidelines (Water by Design, 2017)* for a design removal efficiency of 80%.

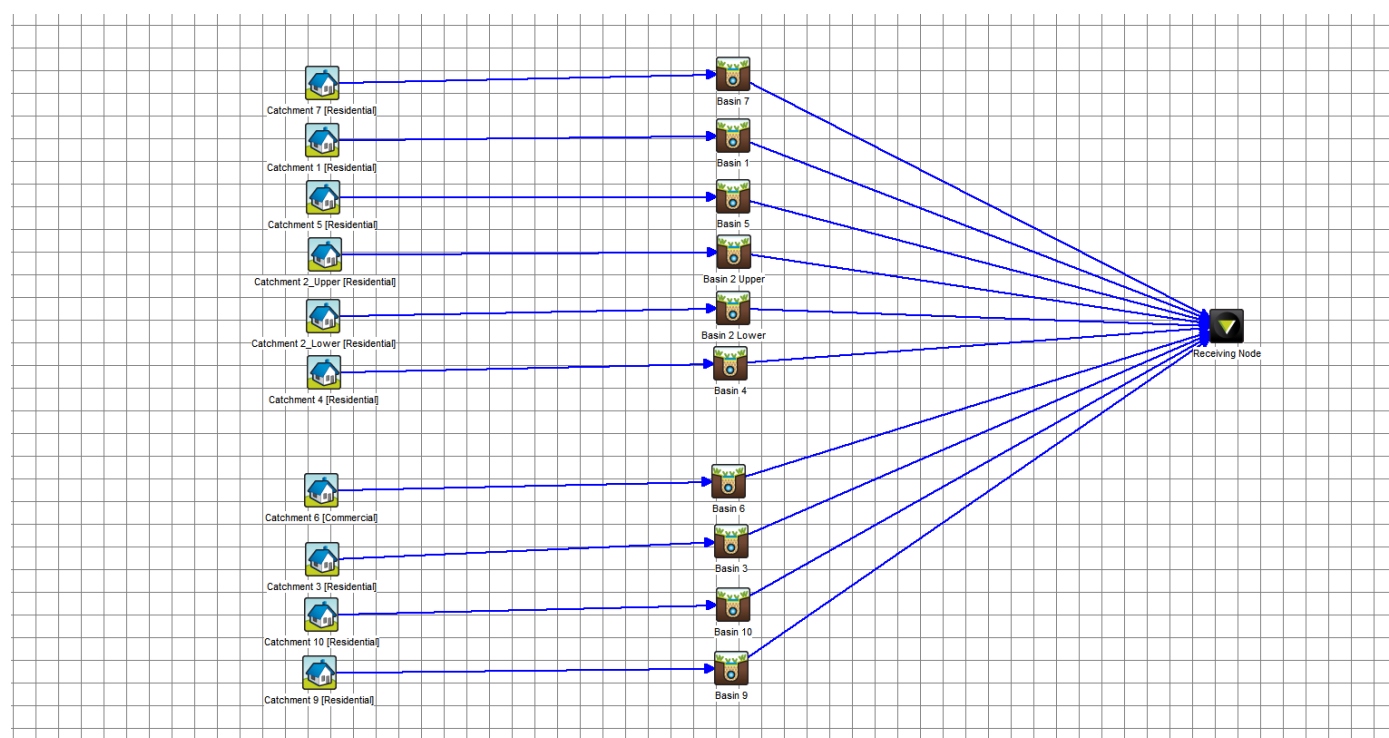


Figure 2.2: MUSIC Model Layout

The details of the proposed treatment train is included in Table 2.3. It is proposed that all basins are constructed with a saturated zone depth of 0.45 m, filter media depth of 0.5 m and extended detention depth of 0.3 m.

Several of the proposed treatment trains include filter areas exceeding the maximum 800 sqm upper limit as specified in the *Bioretention Technical Design Guidelines (WBD, October 2014)*. These treatment trains will be designed with multiple discrete cells to ensure the filter area of each cell does not exceed 800 sqm, the total combined filter area of all cells will match the surface area requirements outlined in Table 2.3 below. Where multiple pipe outlets discharge to a treatment train with multiple cells, the area of the cells should be equivalent to the ratio of the upstream catchments to ensure uniform water quality treatment. These design requirements will be implemented at the detailed design phase.

The table below also includes details of the coarse sediment treatment measures proposed upstream of each bioretention basin. These have been specified based on the following criteria as outlined in the *Bioretention Technical Design Guidelines (WBD, October 2014)*:

- No treatment for catchments smaller than 2 ha.
- Sediment forebays required for catchments greater than 2 ha and less than 5 ha.
- Sediment ponds required for catchments greater than 5 ha.

It's noted that whilst Catchment 2_Lower exceeds 5 ha it is proposed that a sediment forebay is constructed in place of a sediment pond. It is requested that a relaxation of the criteria is approved due to site constraints. It's also noticed that Catchment 8 is proposed to drain east underneath the New Beith Road and connecting into the Stage 5 stormwater network. Suitable allowances were considered for development in Stage 5 to manage the post-developed case stormwater quality criteria. Therefore, no bioretention system was considered for catchment 8.

TABLE 2.3: TREATMENT TRAIN PARAMETERS

Catchment	Filter Media Surface Area (m ²)	Coarse Sediment Removal Device	Coarse Sediment Device Surface Area (m ²)	Sediment Pond Depth (m)	Minimum Sediment Storage Volume (m ³)
1	250	Forebay	N/A	N/A	N/A
2_Lower	400	Forebay	N/A	N/A	N/A
2_Upper	1120	Inlet Pond	60	1.5	9.7
3	860	Inlet Pond	15	1.5	7.2
4	680	Inlet Pond	35	1.5	4.4
5	1000	Inlet Pond	45	1.5	6.2
6	950	Inlet Pond	40	1.5	4.5
7	2200	Inlet Pond	105	1.5	16.0
9	940	Inlet Pond	40	1.5	5.7
10	3200	Inlet Pond	155	1.5	25.5

2.3 MUSIC Modelling Results

Results of the MUSIC model is presented in Table 2.4. The results of the MUSIC modelling indicate that the load-based reduction targets have been achieved with the proposed treatment train. As such, the proposed treatment measures will be adopted for the development Site.

TABLE 2.4: MUSIC MODEL RESULTS

Catchment	TSS Reduction (%)	TP Reduction (%)	TN Reduction (%)	GP Reduction (%)
1	84.9	63.4	53.1	100
2_Lower	82.7	61	49.94	100
2_Upper	82.1	59.9	49.2	100
3	83.9	59.7	55.8	100
4	83	60.9	50	100
5	87	64.5	54.5	100
6	84.4	68	58.2	100
7	85.8	63.3	53.5	100
9	82.9	61.5	50.2	100
10	84.3	61.8	52	100

3. WATERWAY STABILITY MANAGEMENT

A local WBNM hydrologic model was developed to assess the change in peak flows at each of the catchment outlets in the Existing and Developed Scenarios for the 63.2% AEP event. Detention basins were sized such that the Developed Scenario peak flows were mitigated to Existing Scenario flows, this is considered sufficient to address the performance criteria outlined in the *Flagstone City – Masterplan Flood Management Strategy Report (ref. QC4012_002-REP-001-5) (Engeny, 2024)*. The following sections summarise the hydrologic model build and results.

3.1 Catchment Delineation

Catchment delineation to each discharge location into Flagstone Creek and Sandy Creek was undertaken using 2021 LiDAR sourced from Logan City Council. Catchment mapping for the Existing and Developed Scenarios is provided in Figure 3.1 and Figure 3.2, parameters are summarised in Table 3.1.

TABLE 3.1: CATCHMENT DETAILS

Catchment	Existing Scenario		Developed Scenario	
	Catchment Area (ha)	Fraction Impervious (%)	Catchment Area (ha)	Fraction Impervious (%)
1	2.9	0	2.9	69.0
2	26	0	-	-
2_Lower	-	-	6.0	61.6
2_Upper	-	-	19.5	59.9
3	35.2	0	14.9	10.6
4	9.2	0	9.9	67.7
5	11.3	0	11.7	68.9
6	10.8	0	9.2	87.3
7	29.7	0	30.0	67.3
8	5.1	0	2.4	70.8
9	13.2	0	14.9	67.9
10	31.8	0	52.9	64.7

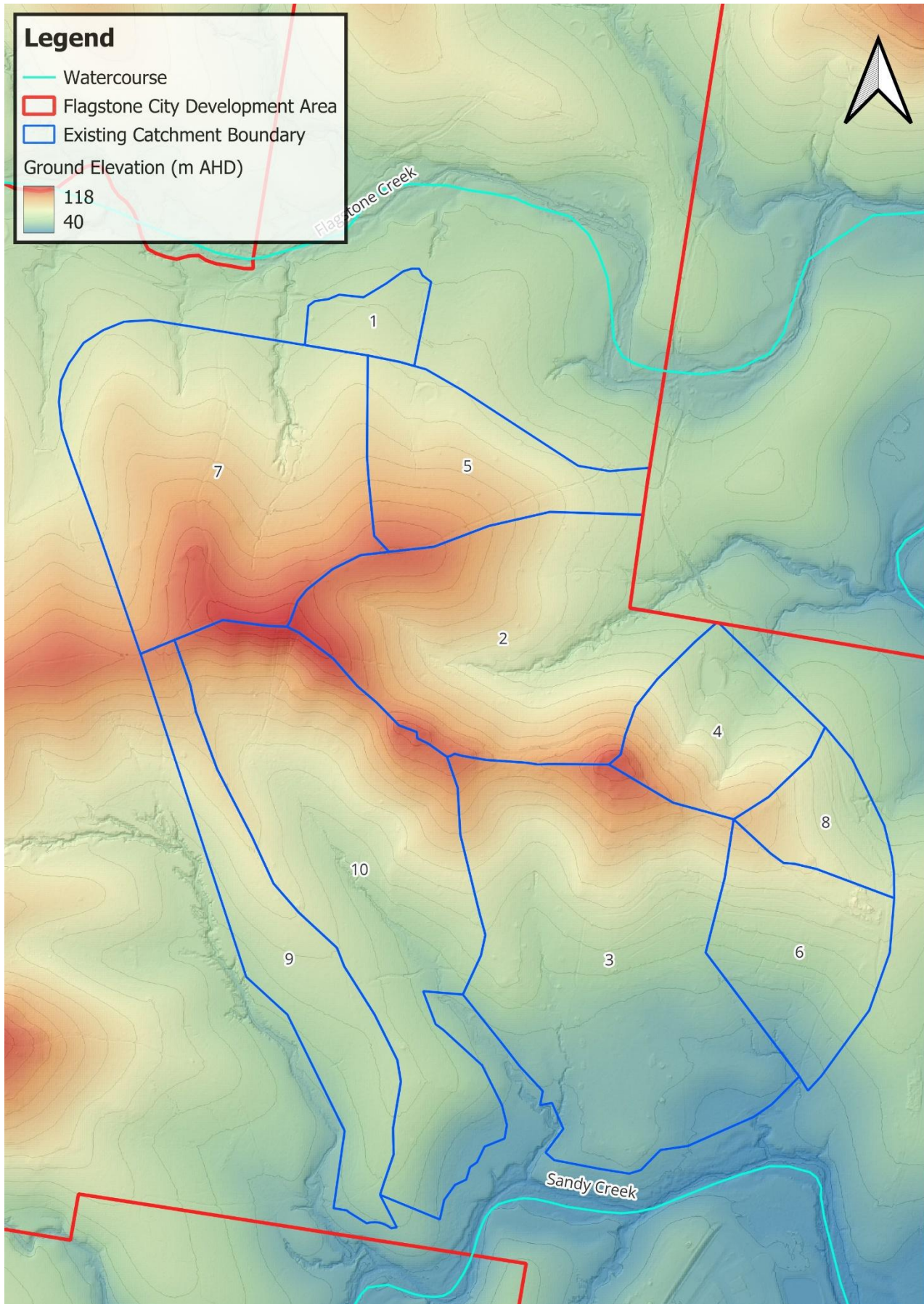


Figure 3.1: Existing Scenario Catchments

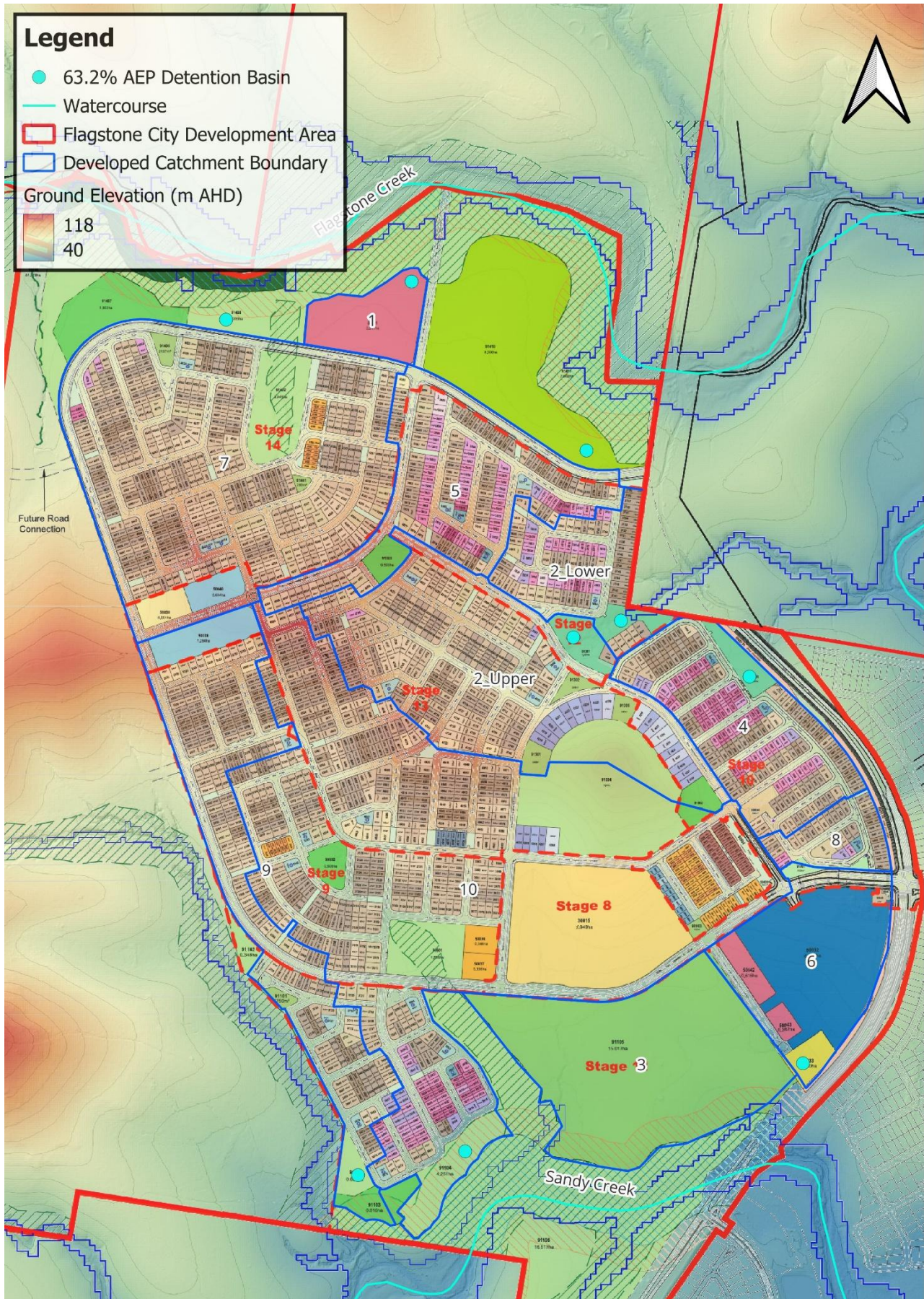


Figure 3.2: Developed Scenario Catchments

3.2 Rainfall-Runoff Parameters

The assumed rainfall-loss parameters adopted in WBNM are in accordance with the endorsed Masterplan FMS and are summarised as follows:

- Application of storm initial loss of 24 mm, as per ARR 2019 specifications, for all pervious surfaces.
- Application of storm continuing loss of 1.6 mm/h, as per ARR 2019 specifications, for all pervious surfaces.
- Application of initial and continuing losses of 1 mm and 0 mm/h, respectively, for all impervious surfaces.
- Application of ARR 2019 rainfall depths sourced from the Bureau of Meteorology (BoM), as per ARR 2019 specifications.
- Application of ARR 2019 median pre-burst rainfall depths, as per ARR 2019 specifications, prior to main burst.
- Simulation of the full ensemble of ten (10) temporal patterns for the East Coast North region, as per ARR 2019 specifications.
- No application of Aerial Reduction Factors.
- WBNM default value of C = 1.6 was adopted.

3.3 Detention Basin Sizing

Detention basins are proposed to mitigate the 63.2% AEP peak flow runoff from the Developed Scenario catchments to Existing Scenario flow prior to entering the waterway downstream. The detention volume is proposed to be located above the extended detention depth of the bioretention basins and all outlet pipes are proposed at the extended detention surface level. Details of the proposed detention parameters are summarised below in Table 3.2. It is assumed that events rarer the 63.2% AEP are diverted around the basin, an emergency overflow weir for each basin will be sized at the detailed design phase.

It's noted that basins 2_Lower and 2_Upper are co-located within the same open space area, it is proposed that discharge from the upper basin (Basin 2_Upper) will be diverted around the lower basin (Basin 2_Lower) to avoid any repeat treatment of flows through the treatment train and repeat mitigation of flows. It's also noticed that Catchment 8 is proposed to drain east underneath the New Beith Road and connecting into the Stage 5 stormwater network. Suitable allowances were considered for development in Stage 5 to manage post-developed case 63.2% AEP runoff and therefore no detention basin for catchment 8 was proposed.

TABLE 3.2: DETENTION BASIN PARAMETERS

Catchment	63.2% AEP Peak Volume (m^3)	63.2% AEP Peak Depth (m)	Outlet Configuration
1	260	1.22	225 mm RCP
2_Lower	730	0.72	2x225 mm RCP
2_Upper	2020	0.84	4x300 mm RCP
4	1340	0.84	3x225 mm RCP
5	1680	1.09	375 mm RCP
6	1430	1.5	375mm RCP
7	4010	1.1	600 mm RCP
9	1850	1.09	450 mm RCP
10	8450	1.52	2x450 mm RCP

3.4 WBNM Results

The peak flow results at each catchment outlet location into Flagstone Creek and Sandy Creek is provided below in Table 3.3. The results demonstrate that the 63.2% AEP peak flows are sufficiently mitigated in the Developed Scenario such that they do not exceed the Existing Scenario flows. The combined discharge from Catchment 2_Upper and Catchment 2_Lower in the Developed Scenario are assessed at the property boundary (lawful point of discharge) from the Site.

TABLE 3.3: PEAK FLOW RESULTS

Catchment	Existing Scenario 63.2% AEP Peak Flow (m ³ /s)	Developed Scenario (Unmitigated) 63.2% AEP Peak Flow (m ³ /s)	Developed Scenario (Mitigated) 63.2% AEP Peak Flow (m ³ /s)	Peak Flow Difference (m ³ /s)
1	0.13	0.37	0.12	-0.01
2	0.86	2.68	0.79	-0.07
3	1.11	0.55	N/A	N/A
4	0.34	1.18	0.28	-0.06
5	0.41	1.42	0.31	-0.1
6	0.39	1.41	0.36	-0.03
7	0.96	3.35	0.79	-0.17
8	0.22	0.32	N/A	N/A
9	0.47	1.75	0.44	-0.03
10	1.02	5.46	0.97	-0.05

4. STORMWATER QUANTITY MANAGEMENT

Stormwater quantity management is proposed to be achieved through a masterplan solution as outlined in the *Flagstone City Masterplan Flood Management Strategy (FMS)* (Engeny, December 2024) (Ref. QC4012_002-REP-001-5). It is proposed that the relevant mitigation structures for CA3 South are constructed in accordance with the Masterplan FMS report to achieve the stormwater quantity and flooding objectives. This report was submitted with the Flagstone CA3 South Further Issues response.

5. PERFORMANCE CRITERIA COMPLIANCE

The performance criteria for the development relating to stormwater quality and stormwater quantity was outlined in Section 1 of this report. These performance criteria are outlined in the endorsed *Stormwater IMP (Peet, July 2018)* (ref. DEV2012/209/6/8) and are required to be achieved to facilitate development. The method for satisfying each of the relevant criteria for CA3 South is summarised below:

- Stormwater Quality:
 - The load-based reduction targets are achieved through the implementation of ten (10) bioretention basins proposed at the outlet of each developed catchment.
 - The waterway stability targets are achieved through the implementation of nine (9) 63.2% AEP detention basins located at the outlet of each developed catchment which mitigate peak flow in the Developed Scenario to Existing Scenario flows.
- Stormwater Quantity:
 - Stormwater quantity is achieved through the implementation of the *Flagstone City Masterplan Flood Management Strategy (FMS)* (Engeny, December 2024) (Ref. QC4012_002-REP-001-5). This report was submitted with the Flagstone CA3 South TMR RFI Response.

6. SUMMARY AND CONCLUSION

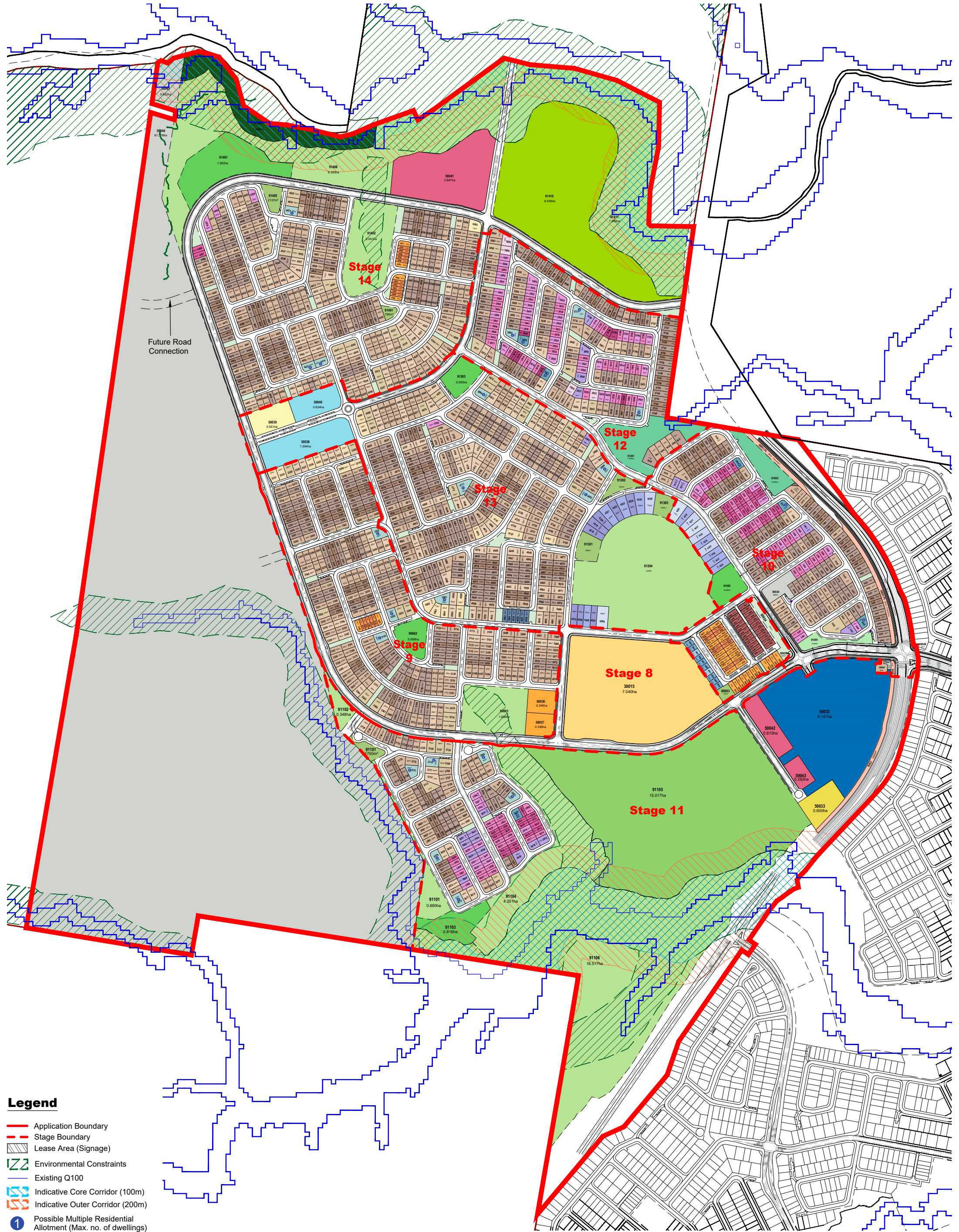
The proposed Flagstone City CA3 South development is required to meet a range of performance criteria associated with stormwater quality and quantity management. The performance criteria are specified in *Flagstone City Masterplan Flood Management Strategy Report (ref. QC4012_002-REP-001-5)* (Engeny, December 2024) and have been defined to protect Environmental Values (EVs) of the downstream receiving waterways and achieve the required Water Quality Objectives (WQOs). It is proposed that a total of nine (9) 63.2% AEP detention basins and ten (10) bioretention basins are constructed at the development discharge locations into Flagstone Creek and Sandy Creek. Details of the basins are provided in the sections above and it is considered that the proposed basins are suitable to achieve the performance criteria for the Flagstone City development.

7. QUALIFICATIONS

- (a) In preparing this document, including all relevant calculation and modelling, Engeny Australia Pty Ltd (Engeny) has exercised the degree of skill, care and diligence normally exercised by members of the engineering profession and has acted in accordance with accepted practices of engineering principles.
- (b) Engeny has used reasonable endeavours to inform itself of the parameters and requirements of the project and has taken reasonable steps to ensure that the works and document is as accurate and comprehensive as possible given the information upon which it has been based including information that may have been provided or obtained by any third party or external sources which has not been independently verified.
- (c) Engeny reserves the right to review and amend any aspect of the works performed including any opinions and recommendations from the works included or referred to in the works if:
 - (i) Additional sources of information not presently available (for whatever reason) are provided or become known to Engeny; or
 - (ii) Engeny considers it prudent to revise any aspect of the works in light of any information which becomes known to it after the date of submission.
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- (f) If any claim or demand is made by any person against Engeny on the basis of detriment sustained or alleged to have been sustained as a result of reliance upon the Report or information therein, Engeny will rely upon this provision as a defence to any such claim or demand.
- (g) This Report does not provide legal advice.

APPENDIX A: CA3 SOUTH LAYOUT





- Legend**
- Application Boundary
 - Stage Boundary
 - Lease Area (Signage)
 - Environmental Constraints
 - Existing Q100
 - Indicative Core Corridor (100m)
 - Indicative Outer Corridor (200m)
 - Possible Multiple Residential Allotment (Max. no. of dwellings)

TO BE READ IN CONJUNCTION WITH 110056-640 STAGES 8-14 OVERALL STATISTICS

PLAN REF: **110056 – 639**
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0 100 200 300 400 500 1 : 7,500 @ A3

FLAGSTONE CA3 SOUTH
STAGES 8 - 14
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CA3 SOUTH - Stage 8 - 14 Yield Breakdown									
Lot Type	Stage 8	Stage 9	Stage 10	Stage 11	Stage 12	Stage 13	Stage 14	Overall	
	Yield	Yield	Yield	Yield	Yield	Yield	Yield	Yield	%
20.5m Deep Product									
Premium Villa 12.5m Allotment	—	8	—	—	—	—	—	8	0%
Courtyard 14m Allotment	—	2	—	—	—	—	—	2	0.1%
Subtotal	—	10	—	—	—	—	—	10	1%
25m Deep Terrace Product									
Terrace 9.5m Allotment	—	24	—	—	—	—	—	24	1%
Subtotal	—	24	—	—	—	—	—	24	1%
25m Deep Product									
Villa 10.5m Allotment	—	—	25	17	7	—	—	49	3%
Premium Villa 12.5m Allotment	—	—	24	17	39	—	2	82	5%
Courtyard 14m Allotment	—	—	12	12	31	1	3	59	3%
Premium Courtyard 16m Allotment	—	—	4	11	4	1	—	20	1%
Premium Traditional 20m Allotment	—	—	—	—	4	—	—	4	0%
Possible Multiple Residential Allotment	—	—	3	1	2	—	—	6	0%
Subtotal	—	—	68	58	87	2	5	220	12%
28m Deep Product									
Terrace 7.5m Allotment	—	15	—	—	—	—	10	25	1%
Terrace 9.5m Allotment	—	30	—	—	—	—	4	34	2%
Subtotal	—	45	—	—	—	—	14	59	3%
30m Deep Product									
Terrace 9.5m Allotment	—	—	—	—	—	6	—	6	0.3%
Villa 10.5m Allotment	—	47	40	12	27	40	52	218	12%
Premium Villa 12.5m Allotment	—	92	66	28	64	122	111	483	27%
Courtyard 14m Allotment	—	117	32	33	42	133	152	509	28%
Premium Courtyard 16m Allotment	—	26	3	10	10	61	43	153	9%
Traditional 18m Allotment	—	7	—	—	—	11	—	18	1%
Premium Traditional 20m Allotment	—	10	1	6	4	12	16	49	3%
Possible Multiple Residential Allotment	—	3	—	6	3	5	3	20	1%
Subtotal	—	302	142	95	150	390	377	1456	81%
50m+ Deep Product									
Courtyard 14m Allotment	—	—	—	—	—	8	—	8	0%
Premium Courtyard 16m Allotment	—	—	5	—	—	4	—	9	1%
Traditional 18m Allotment	—	—	3	—	—	1	—	4	0%
Premium Traditional 20m Allotment	—	—	2	—	—	1	—	3	0%
Subtotal	—	—	10	—	—	14	—	24	1%
Total Residential Allotments	—	381	220	153	237	406	396	1793	100%
Residential Net Density	—	17.9 dw/ha	14.9 dw/ha	13.1 dw/ha	16.0 dw/ha	14.0 dw/ha	15.1 dw/ha	15.1 dw/ha	
Super Lots									
Local Centre	—	—	—	—	—	12	—	12	
District Centre	—	—	—	1	—	—	—	1	
Ambulance	—	—	—	1	—	—	—	1	
Child Care	—	2	—	—	—	—	—	2	
Community Centre	—	—	—	—	—	—	—	—	
State Primary School	1	—	—	—	—	—	—	1	
Medium Density Allotment	—	—	—	2	—	—	1	3	
Balance Allotment	—	—	5	—	—	—	2	7	
Management Lot	—	—	2	1	—	—	—	3	
Subtotal	1	2	7	5	—	12	3	30	
Utilities									
Water Booster Pump Station	—	—	1	—	—	—	—	1	
Water Booster Pump Station	—	—	1	—	—	—	—	1	
Total Allotments	1	383	228	158	237	418	399	1824	
Maximum Potential Residential Dwellings (Includes Multiple Residential Allotments)	—	384	223	165	245	415	401	1833	
Maximum Potential Net Residential Density	—	18.1 dw/ha	15.1 dw/ha	14.1 dw/ha	16.5 dw/ha	14.3 dw/ha	15.3 dw/ha	15.4 dw/ha	

CA3 SOUTH - Stage 8 - 14 Land Budget									
Land Use	Stage 8	Stage 9	Stage 10	Stage 11	Stage 12	Stage 13	Stage 14	Overall	
	Area	Area	Area	Area	Area	Area	Area	Area	%
	7.040 ha	25.949 ha	19.675 ha	65.728 ha	16.235 ha	37.815 ha	144.017 ha	316.459 ha	100.0%
Saleable Area									
Residential Allotments	—	14.689 ha	8.688 ha	6.282 ha	9.687 ha	18.293 ha	16.506 ha	74.145 ha	23.4%
Medium Density	—	—	—	0.897 ha	—	—	2.847 ha	3.744 ha	1.2%
Local Centre	—	—	—	—	—	1.928 ha	—	1.928 ha	0.6%
District Centre	—	—	—	6.147 ha	—	—	—	6.147 ha	1.9%
Ambulance	—	—	—	0.600 ha	—	—	—	0.600 ha	0.2%
Child Care	—	0.682 ha	—	—	—	—	—	0.682 ha	0.2%
Community Centre	—	—	—	—	—	0.551 ha	—	0.551 ha	0.2%
State Primary School	7.040 ha	—	—	—	—	—	—	7.040 ha	2.2%
Management Lot	—	—	0.528 ha	0.359 ha	—	—	—	0.887 ha	0.3%
Total Area of Allotments	7.040 ha	15.371 ha	9.216 ha	14.285 ha	9.687 ha	20.771 ha	19.353 ha	95.723 ha	30.2%
Utilities									
Water Booster Pump Station	—	—	0.065 ha	—	—	—	—	0.065 ha	0.0%
Area of Utilities	—	—	0.065 ha	—	—	—	—	0.065 ha	0.0%
Road									
North South Arterial Dedication (incl. batters)	—	—	3.004 ha	9.049 ha	—	—	0.137 ha	12.190 ha	3.9%
Trunk Connector 2 Lanes (23.8m)	—	2.485 ha	0.914 ha	0.143 ha	—	0.328 ha	4.173 ha	8.043 ha	2.5%
Neighbourhood Connector (21m)	—	0.414 ha	1.197 ha	1.227 ha	1.696 ha	1.111 ha	0.643 ha	6.288 ha	2.0%
Neighbourhood Access Street (16.5m)	—	4.829 ha	3.389 ha	3.116 ha	3.185 ha	7.491 ha	6.185 ha	28.194 ha	8.9%
Laneway (6.5m)	—	0.119 ha	—	—	—	0.060 ha	0.082 ha	0.261 ha	0.1%
Pedestrian Linkages	—	0.330 ha	0.030 ha	0.089 ha	0.246 ha	0.467 ha	0.621 ha	1.782 ha	0.6%
Total Area of New Road	—	8.177 ha	8.534 ha	13.624 ha	5.126 ha	9.457 ha	11.841 ha	56.758 ha	17.9%
Open Space									
Conservation Buffer	—	—	—	—	—	—	1.988 ha	1.988 ha	0.6%
Corridor Park / Conservation	—	1.556 ha	—	21.814 ha	—	6.348 ha	18.056 ha	47.774 ha	15.1%
Stormwater Management	—	—	0.699 ha	—	1.423 ha	—	—	2.122 ha	0.7%
Regional Sports	—	—	—	15.017 ha	—	—	—	15.017 ha	4.7%
District Sports	—	—	—	—	—	—	8.556 ha	8.556 ha	2.7%
Neighbourhood Recreation Park	—	0.506 ha	0.539 ha	0.816 ha	—	0.500 ha	1.903 ha	4.264 ha	1.3%
Local Recreation Park	—	0.102 ha	—	0.175 ha	—	0.742 ha	0.293 ha	1.312 ha	0.4%
Local Linear Recreation Park	—	0.259 ha	0.272 ha	—	—	—	—	0.531 ha	0.2%
Total Open Space	—	2.423 ha	1.510 ha	37.822 ha	1.423 ha	7.590 ha	30.796 ha	81.564 ha	25.8%
Balance Allotments									
Balance Allotment	—	—	0.349 ha	—	—	—	82.024 ha	82.373 ha	26.0%
Total Balance Allotments	—	—	0.349 ha	—	—	—	82.024 ha	82.373 ha	26.0%

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FLAGSTONE CA3 SOUTH
STAGES 8 - 14
OVERALL PLAN OF SUBDIVISION STATISTICS

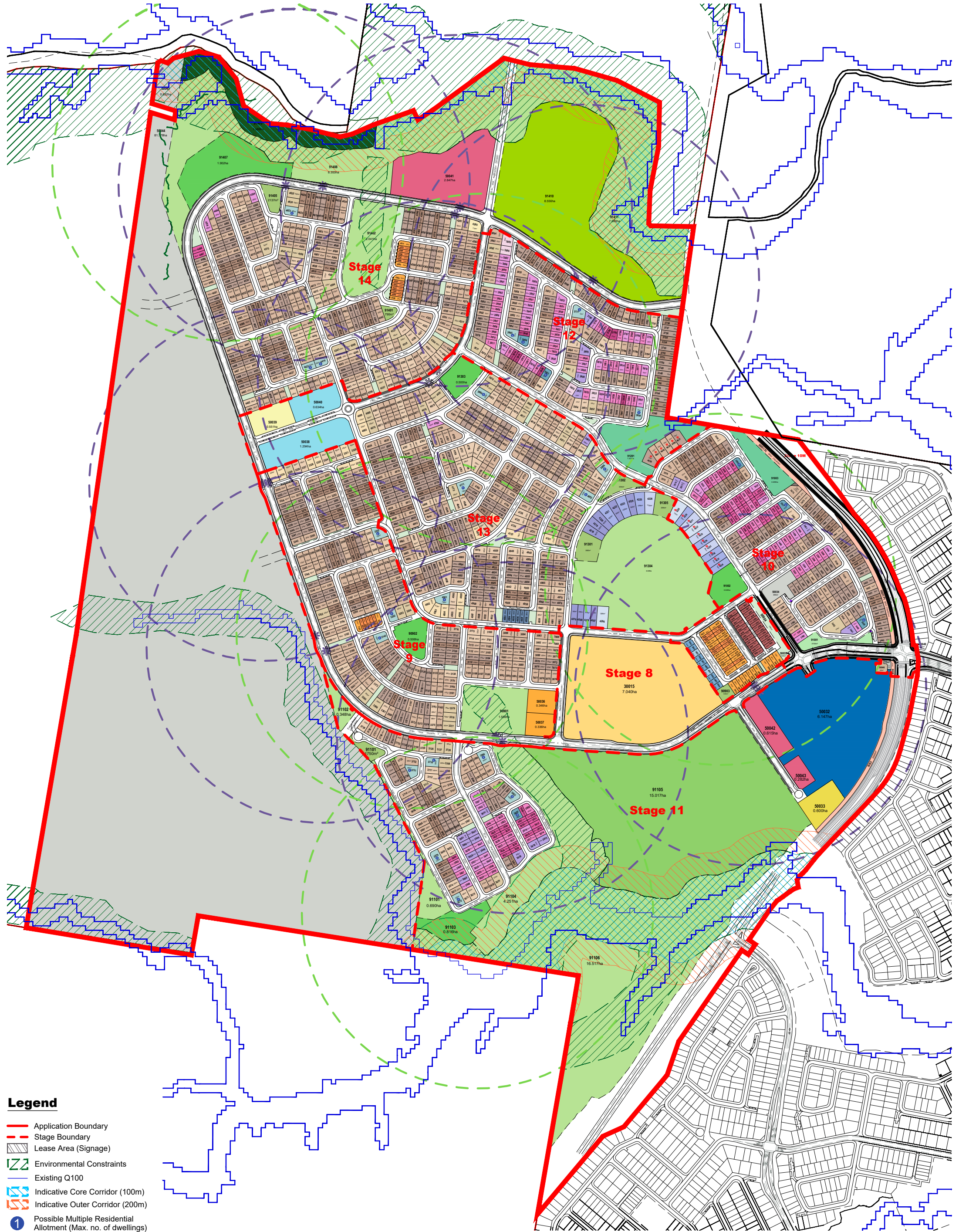
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- Legend**
- Application Boundary
 - Stage Boundary
 - Lease Area (Signage)
 - Environmental Constraints
 - Existing Q100
 - Indicative Core Corridor (100m)
 - Indicative Outer Corridor (200m)
 - Possible Multiple Residential Allotment (Max. no. of dwellings)

TO BE READ IN CONJUNCTION WITH 110056-640 STAGES 8-14 OVERALL STATISTICS

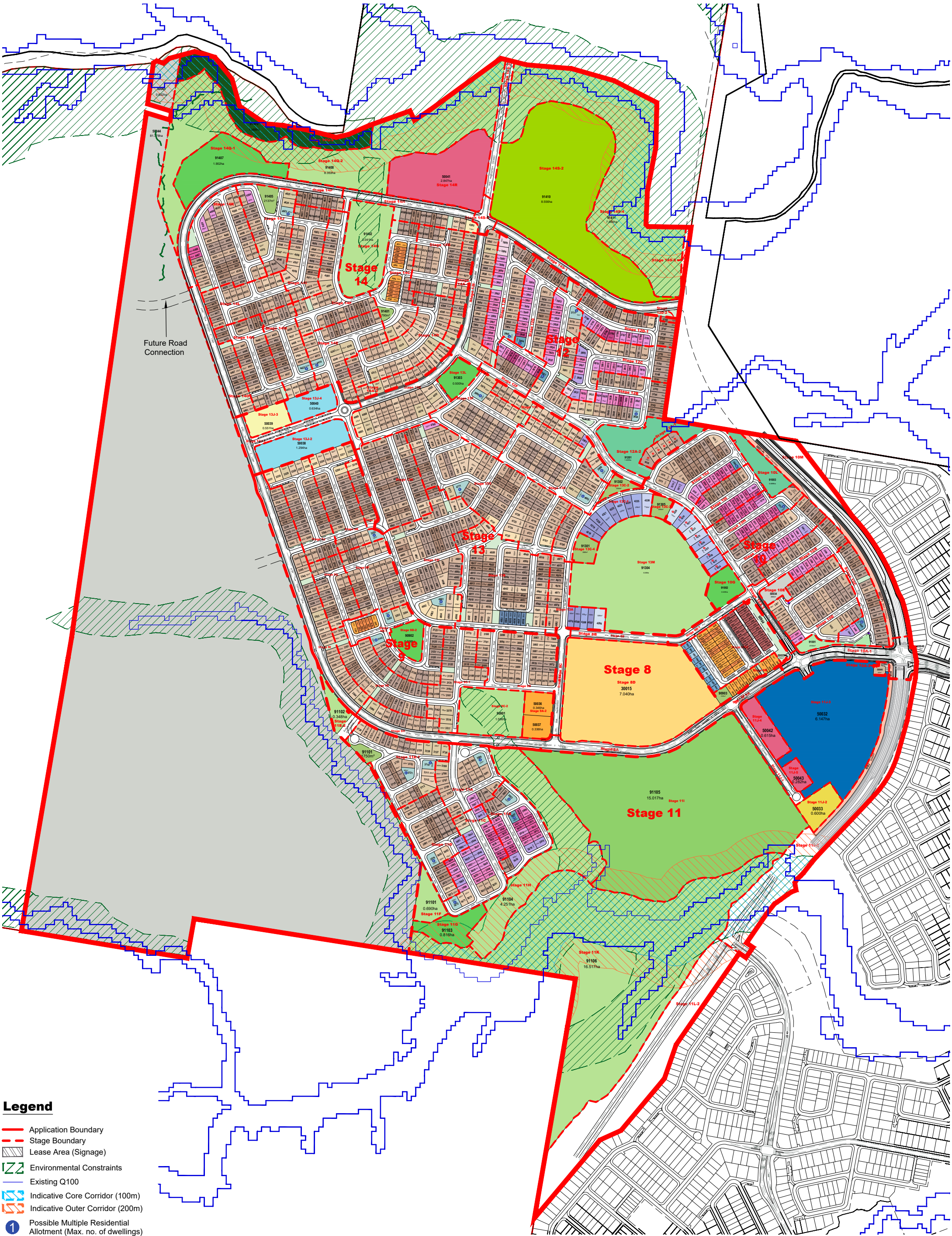
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FLAGSTONE CA3 SOUTH
STAGES 8 - 14
OVERALL PLAN OF SUBDIVISION CATCHMENT

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TO BE READ IN CONJUNCTION WITH 110056-640 STAGES 8-14 OVERALL STATISTICS

